

Appl. Ser. No.10/664,395
Examiner: LAVARIAS, Arnel C.
Response to Final Office Action dated October 28, 2005

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Listing of Claims

This listing of claims will replace all prior versions and listings of claims in the application.

1. (currently amended) An optically active color filter comprising:
a linear polarizer for polarizing light from a light source;
an optically active device for rotating the polarized light from the polarizer,
the optically active device comprising an optically active liquid of randomly oriented and positioned molecules; and
an adjustable polarizer for selecting a desired color from the rotated polarized light from the optically active device.
2. (original) The color filter of claim 1, wherein the linear polarizer is a fixed-position linear polarizer.
3. (canceled).
4. (previously presented) The color filter of claim 1, wherein the optically active liquid is corn syrup.
5. (previously presented) The color filter of claim 1, wherein the optically active liquid is a sucrose solution.
6. (original) The color filter of claim 1, wherein the adjustable polarizer is a first rotatable polarizer.
7. (previously presented) An optically active color filter comprising:
a linear polarizer for polarizing light from a light source;
an optically active device for rotating the polarized light from the polarizer;
and

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an adjustable polarizer for selecting a desired color from the rotated polarized light from the optically active device, the adjustable polarizer comprising a circular-shaped rotatable polarizer having a cutout, wherein the rotatable polarizer is disposed offset from a path of the rotated polarized light from the optically active device, and further wherein the radius of the rotatable polarizer extends beyond the light path.

8. (original) The color filter of claim 6 further comprising a second rotatable polarizer disposed between the light source and linear polarizer.

9. (previously presented) The color filter of claim 1, wherein the optically active device further comprises an adjustable thickness container for holding the optically active liquid and further, wherein the thickness of the optically active device is changed by adjusting the container.

10. (previously presented) The color filter of claim 1, wherein the optically active device comprises a multiplicity of removable layers of optically active liquid.

11. (original) The color filter of claim 1, wherein at least one element thereof is removable.

12. (original) The color filter of claim 1, wherein the optical activity of the optically active device is electrically controlled.

13. (previously presented) The color filter of claim 1, wherein the thickness of the optically active liquid is not uniform such that all polarized light from the light source travels the same distance through the optically active liquid.

14. (original) The color filter of claim 1, wherein the color filter is controlled by a remote control device.

15. (original) The color filter of claim 14, wherein the control device is an electronic control device.

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16. (original) The color filter of claim 14, wherein the remote control device is a wireless remote control device.

17. (currently amended) ~~An~~ The optically active color filter of claim 1, wherein comprising:

~~a first linear polarizer for polarizing light from a light source;~~

~~an optically active device for rotating the polarized light from the linear polarizer, the optically active device comprising an optically active liquid; and~~

the adjustable polarizer comprises an electrically controlled polarizing assembly for selecting a desired color from the rotated polarized light from the optically active device.

18. (original) The color filter of claim 17, wherein the polarizing assembly comprises:

a voltage-controlled liquid crystal panel and

a second linear polarizer.

19. (previously presented) An optically active color filter comprising:

a linear polarizing beamsplitter for polarizing and splitting light from a light source into a first polarized light and a second polarized light;

an optically active means for rotating the first and second polarized light from the beamsplitter;

a first adjustable polarizer for selecting a desired first color from the rotated first polarized light from the optically active means; and

a second adjustable polarizer for selecting a desired second color from the rotated second polarized light from the optically active means.

20. (original) The color filter of claim 19, wherein the color filter is controlled by a remote control device.

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21. (original) The color filter of claim 19, wherein the optically active means is an optically active device.

22. (original) The color filter of claim 19, wherein the optically active means comprises:

a first optically active device for rotating the first polarized light from the beamsplitter; and

a second optically active device for rotating the second polarized light from the beamsplitter.

23. (currently amended) A lighting effects device, the device comprising:

an adjustable polarizer for polarizing light from a light source;

an optically active device for rotating the polarized light from the polarizer, the optically active device comprising an optically active liquid of randomly oriented and positioned molecules; and

a polarizing material for producing a desired color from the rotated polarized light from the optically active device.

24. (original) The lighting effects device of claim 23, wherein the lighting effects device is controlled by a remote control device.

25. (canceled)

26. (currently amended) An optically active color filter comprising:

an adjustable polarizer for polarizing and selecting a desired color from a light source;

an optically active device for rotating the polarized light from the adjustable polarizer, the optically active device comprising an optically active liquid of randomly oriented and positioned molecules; and

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a linear polarizer for polarizing the rotated polarized light.

27. (currently amended) A method for producing a colored light, the method comprising:

polarizing light from a light source;

rotating the polarized light through an optically active liquid of randomly oriented and positioned molecules; and

selecting a desired color from the rotated polarized light.

28. (original) The method of claim 27, wherein the selecting step comprises passing the rotated polarized light through an adjustable polarizer.

29. (previously presented) The method of claim 27, further comprising, adjusting the thickness of the optically active liquid.

30. (previously presented) The method of claim 27, wherein the thickness of the optically active liquid is not uniform such that all polarized light from the light source travels the same distance through the optically active liquid.

31. (previously presented) The method of claim 27, wherein the optically active liquid is corn syrup.

32. (currently amended) ~~The color filter of claim 6,~~ An optically active color filter comprising:

a linear polarizer for polarizing light from a light source;

an optically active device for rotating the polarized light from the polarizer,
the optically active device comprising an optically active liquid; and

an adjustable polarizer for selecting a desired color from the rotated polarized light from the optically active device, wherein the color from the ~~first rotatable~~ adjustable polarizer has only one peak wavelength in the visible light spectrum and further, wherein the

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peak wavelength stays in the visible light spectrum for at least 90° of rotation of the ~~first~~
~~rotatable~~ adjustable polarizer.

33. (previously presented) The color filter of claim 9, wherein the adjustable thickness container is a piston.

34. (previously presented) The color filter of claim 9, wherein the adjustable thickness container is a bellows.

35. (previously presented) The color filter of claim 19, wherein the optical activity of the optically active means is electrically controlled.

36. (previously presented) The color filter of claim 19, wherein at least one adjustable polarizer is electrically controlled.

37. (previously presented) The color filter of claim 19, wherein the linear polarizing beamsplitter includes an adjustable polarizer for adjusting the polarizing angle of the light from the light source.

38. (previously presented) The color filter of claim 21, wherein the thickness of the optically active device is adjustable.

39. (previously presented) The color filter of claim 22, wherein the thickness of at least one optically active device is adjustable.

40. (currently amended) A method for calibrating the color filter of claim 1, the method comprising:

projecting a monochromatic light into the linear polarizer; and

adjusting the adjustable polarizer ~~until maximum~~ to a point of greatest extinction is reached;

and setting the point of greatest extinction as a baseline.

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41. (currently amended) An apparatus for projecting colored images, the apparatus comprising:

an image projector; and

an optically active color filter mounted inside the image projector, the color filter comprising:

a linear polarizer for polarizing light from a light source;

an optically active device for rotating the polarized light from the polarizer, the optically active device comprising an optically active liquid of randomly oriented and positioned molecules; and

an adjustable polarizer for selecting a desired color from the rotated polarized light from the optically active device.